TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2018-04-17-01**	**Date: 19-04-18**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.	
Address	:	Project Sub Division, BBMP, Bangalore.	
Project Name	:	Widening of Doddabommasandra Main Road in Ward No.10	
Agency	:	M/s.Prashanth Road Infra Project & Developer Pvt.Ltd.	
Customer Reference	:	BBMP/BZ/EE(PR)/WO/01/15-16	
Source of Sample	:	Hot Mix Plant, Bangalore	
Sample Condition	:	Satisfactory	
Date of Receipt	:	17-04-18	
Sample ID No	:	2018-04-17-01/01	
Type of Mix	:	BC (Bituminous Concrete)	
Date of test	:	17-04-18	

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	12.47	12.73	10KN(min)
2	Marshal flow at 60°C, mm	4.57	3.03	2-4
3	Percent air Voids	4.78	5.77	3-5
4	Percent Voids in mineral Aggregate(VMA %)	15.44	14.75	13-15
5	Percent Voids filled with Bitumen(VFB %)	75.09	73.59	65-75
6	Density, g/cc	2.26	2.25	–

Asst. Executive Engineer Project Division Yelahanka Zone Bangalore

Note:-

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Samples will be disposed after 90 days from the date of issue of test certificate

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

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TEST RESULTS OF GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2018-04-19-01**	**Date: 19-04-18**
Customer	:	Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.	
Address	:	Project Sub Division, BBMP, Bangalore.	
Project Name	:	Widening of Doddabommasandra Main Road in Ward No.10	
Agency	:	M/s.Prashanth Road Infra Project & Developer Pvt.Ltd.	
Customer Reference	:	BBMP/BZ/EE(PR)/WO/01/15-16	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	19-04-18	
Sample ID No	:	2018-04-19-01/01	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Date of test	:	19-04-18	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	476	477
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	4.8	4.6
4	Average percentage	%	4.7	

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Lab ID : **CP-RW-2018-04-19-01** **Date: 19-04-18**

Sample ID No : **2018-04-19-01/01**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 476

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	8	8	1.7	98.3	90-100
19	42	50	10.5	89.5	71-95
13.2	58	108	22.7	77.3	56-80
4.75	176	284	59.7	40.3	38-54
2.36	48	332	69.7	30.3	28-42
0.3	59	391	82.1	17.9	7-21
0.075	57	448	94.1	5.9	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 477

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	9	9	1.9	98.1	90-100
19	48	57	11.9	88.1	71-95
13.2	58	115	24.1	75.9	56-80
4.75	178	293	61.4	38.6	38-54
2.36	49	342	71.7	28.3	28-42
0.3	60	402	84.3	15.7	7-21
0.075	58	460	96.4	3.6	2-8

Asst. Executive Engineer
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Bangalore

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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : **CP-RW-2018-04-20-01** **Date: 20-04-18**

Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.

Address : Project Sub Division, BBMP, Bangalore.

Project Name : Widening of Doddabommasandra Main Road in Ward No.10

Agency : M/s.Prashanth Road Infra Project & Developer Pvt.Ltd.

Customer Reference : BBMP/BZ/EE(PR)/WO/01/15-16

Source of Sample : Sample supplied by Agency

Date of Receipt : 20-04-18

Sample ID No : 2018-04-20-01/01

Type of Mix : BC (Bituminous Concrete)

Date of test : 20-04-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	473	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.40	5.60
4	Average percentage	%	5.5	

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Project Div.
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Lab ID : **CP-RW-2018-04-20-01**

Sample ID : **2018-04-20-01/01** **Date: 20-04-18**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	42	42	9.0	91.0	90-100
9.5	75	118	24.9	75.1	70-88
4.75	80	198	41.8	58.2	53-71
2.36	33	231	48.8	51.2	42-58
1.18	24	254	53.8	46.2	34-48
0.6	42	297	62.7	37.3	26-38
0.3	48	345	72.9	27.1	18-28
0.15	69	414	87.5	12.5	12-20
0.075	24	438	92.5	7.5	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	38	38	8.0	92.0	90-100
9.5	57	94	20.0	80.0	70-88
4.75	85	179	38.0	62.0	53-71
2.36	90	269	57.0	43.0	42-58
1.18	19	288	61.0	39.0	34-48
0.6	5	293	62.0	38.0	26-38
0.3	57	349	74.0	26.0	18-28
0.15	52	401	85.0	15.0	12-20
0.075	33	434	92.0	8.0	4-10

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Bangalore

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : CP-RW-2018-04-21-01

Date: 21-04-18

Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.

Address : Project Sub Division, BBMP, Bangalore.

Project Name : Widening of Doddabommasandra Main Road in Ward No.10

Agency : M/s.Prashanth Road Infra Project & Developer Pvt.Ltd.

Customer Reference : BBMP/BZ/EE(PR)/WO/01/15-16

Source of Sample : Sample supplied by Agency

Date of Receipt : 21-04-18

Sample ID No : 2018-04-21-01/01

Type of Mix : BC (Bituminous Concrete)

Date of test : 21-04-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	473	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	5.40	5.60
4	Average percentage	%	5.5	

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Lab ID : **CP-RW-2018-04-21-01**

Sample ID : **2018-04-21-01/01** **Date: 21-04-18**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	0	0	0.0	100.0	90-100
9.5	137	137	29.0	71.0	70-88
4.75	85	222	47.0	53.0	53-71
2.36	-5	218	46.0	54.0	42-58
1.18	38	255	54.0	46.0	34-48
0.6	71	326	69.0	31.0	26-38
0.3	38	364	77.0	23.0	18-28
0.15	43	407	86.0	14.0	12-20
0.075	24	430	91.0	9.0	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 472

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	14	14	3.0	97.0	90-100
9.5	113	127	27.0	73.0	70-88
4.75	80	208	44.0	56.0	53-71
2.36	24	231	49.0	51.0	42-58
1.18	14	245	52.0	48.0	34-48
0.6	94	340	72.0	28.0	26-38
0.3	33	373	79.0	21.0	18-28
0.15	14	387	82.0	18.0	12-20
0.075	38	425	90.0	10.0	4-10

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